

Applicant : Shi Baw Ch'ng
Serial No. : 10/052,897
Filed : January 16, 2002
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Attorney's Docket No.: 12144-010001

REMARKS

Comments of the applicant below are each preceded by related comments of the examiner, shown in small, bold type.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, in the limitation "sending traps to a network management station with respect to fewer than all of the faults that are occurring, based on the results of the information processing," the part stating "with respect to fewer than all of the faults" is unclear.

As per claim 5, it is unclear whether faults are being sent or not being sent and under what conditions a fault is sent or not.

As per claim 7, it is unclear when the traps contain information about at least some of the faults occurring in the entities and when the traps don't contain this information.

The applicant respectfully believes that claims 1, 5 and 7 are clear in their wording and asks the examiner to provide a more specific indication of what is thought to be unclear about them.

As per claim 10, the limitation "network entities that are subject to faults, the faults of at least some of the network entities having causal relationships to the faults of at least some of the network entities" is unclear. This limitation is very broad and does not clearly describe how the network entities and their faults are related and what the sent traps are based upon.

Without conceding the examiner's position and without intending to narrow the very broad scope of the claim, claim 10 has been amended.

Claims 1-3, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Rangaraian et al. US Patent No. 5,828,830. Rangaraian teaches the invention as claimed including a method and system for prioritizing and filtering traps from network devices (see abstract)

As per claim 1, Rangaraian teaches a method comprising processing information about network faults that contribute to a failure of a network element in which the faults are occurring (a system is monitored and faults on the system are noted by an agent; column 2, lines 6-29; column 3, lines 58-67; column 4, lines 1-4), and sending traps to a network management station with respect to fewer than all of the faults that are occurring, based on the results of the information processing (the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 57-67; column 4, lines 1-5; column 4, lines 20-67; column 5, lines 1-13).

As per claim 2, Rangaraian teaches the method of claim 1 in which the information is processed using a directed acyclic graph (column 4, lines 5-19; column 6, lines 14-33).

As per claim 3, Rangaraian teaches the method of claim 2 in which nodes of the graph represent entities of the network element (column 3, lines 9-29).

The applicant disagrees. In Rangaraian, "agents ... send out traps *whenever* certain conditions occur" (col. 3 lines 47-48) (emphasis added). As a trap is sent for *every* fault (that is, every "condition"), the Rangaraian system includes a network manager that receives *all* of the traps and then filters them to reduce the number of traps that have to be processed (see col. 3 lines 58-64). Rangaraian does not disclose or suggest "processing information about network faults ..., and sending traps to a network management station *with respect to fewer than all* of the faults that are occurring, based on the results of the information processing" as recited in claim 1. For at least this reason, claim 1 and its dependent claims are patentable.

As per claim 7, Rangaraian teaches a method comprising at a network management station, receiving traps sent from network elements, the traps including information about at least some faults occurring in entities of the network elements, the traps not including information about at least some faults occurring in the entities. reporting the traps to an operator of the network management station (a system is monitored and faults on the system are noted by an agent and the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 58-67; column 4; column 5, lines 1-13).

As per claim 8, Rangaraian teaches the method of claim 7 also including reporting the traps to an operator of the network management station (the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 57-67; column 4, lines 1-5; column 4, lines 20-67; column 5, lines 1-13)

The applicant disagrees. Rangaraian teaches that the network manager receives traps including information about *each* of the faults occurring in the entities. Rangaraian does not disclose or suggest a method in which the network management station receives "traps *not* including information about *at least some* faults occurring in the entities" as recited in claim 7 (emphasis added). For at least this reason, claim 7 and its dependent claims are patentable.

Claims 4-6, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rangaraian et al. US Patent No. 5,828,830 in view of Rariden et al. US Patent No. 6,292,472 Rarident teaches the invention as claimed including checking faults in a network (see abstract).

Dependent claim 4-6, and 9 are patentable for at least the same reasons as the independent claims from which they depend.

As per claim 10, Rangaraian teaches Apparatus comprising

a network element having network entities that are subject to faults, the faults of at least some of the network entities having relationships to the faults of at least some of the network entities (a system is monitored and faults on the system are noted by an agent and the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 58-67; column 4; column 5, lines 1 - 13). a medium bearing information capable of configuring a machine in the network element to send traps (the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 58-67; column 4; column 5, lines 1 - 13).

Rangaraian does not teach based on the causal relationships to a network management station. Rariden teaches that faults have a causal relationship (column 3, lines 9-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine determining faults of Rangaraian with determining the causal relationship of faults of Rariden. A person of ordinary skill in the art would have been motivated to do this to determine the priority of the faults so that the most important faults are handled in a more urgent manner (Rangaraian column 3, lines 58-67; column 4, lines 1-4).

The examiner acknowledges that Rangaraian does not teach faults having a relationship that is *causal* and relies on Rariden for such teaching. Apparently, the examiner considers numbering that is sequential, as in Rariden, to amount to expressing a causal relationship as in claim 10.

In Rariden, each trap that is generated by a node has a sequential trap number:

In summary, all status changes for managed SNMP high speed switch nodes are reported via traps. The SNMP/File transfer protocol agent subsystem 62 (FIG. 3) increments a value of an snmpTrapNumbers each time a trap is sent to the network management system 12, and the snmpTrapNumbers object is appended to each SNMPv1trap (col. 2 lines 41-48).

In Rariden, the trap number does not indicate a causal relationship between the faults with which the traps are associated. At most, the trap number indicates the relative sequential position of a trap in a series of traps. Thus Rariden does not disclose and would not have suggested "faults of at least some of the network entities having *causal* relationships to the faults of at least some others of the network entities" as recited in claim 10 (emphasis added). For at least this reason, claim 10 is patentable.

As per claim 11, Rangaraian teaches a medium bearing information capable of configuring a machine to determine faults occurring in entities of a network element (a system is monitored and faults on the system are noted by an agent and the agent sends traps to the network manager; column 2, lines 6-29; column 3, lines 58-67; column 4; column 5, lines 1 - 13).

Rangaraian does not teach determining causal relationships to a network management station.

Rariden teaches determining the causal relationship between (column 3, lines 9-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine determining faults of Rangaraian with determining the causal relationship of faults of Ridden. A person of ordinary skill in the art would have been motivated to do this to determine the priority of the faults so that the most important faults are handled in a more urgent manner (Rangaraian column 3, lines 58-67; column 4, lines 1-4)

As per claim 12, Rangaraian teaches the medium of claim 11 in which the information comprises a directed acyclic graph of nodes (column 4, lines 5-19; column 6, lines 14-33)

As previously discussed, neither Rangaraian nor Rariden disclose or suggest faults having causal relationships. Accordingly, the applicant submits that neither Rangaraian nor Rariden disclose "configuring a machine to determine causal relationships among faults occurring in entities of a network element" as recited in claim 11. For at least this reason, claim 11 and its dependent claim 12 are patentable.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

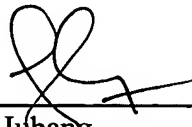
Enclosed is a \$200.00 check for excess claim fees. Please apply any other charges or credits to deposit account 06-1050.

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Respectfully submitted,

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